Special Issue

Advanced Membrane Technology for Hydrogen Production and Carbon Capture

Message from the Guest Editors

Hydrogen and carbon are two key elements in the global energy transition. Hydrogen, as a clean and renewable energy carrier, can be used for various applications, such as fuel cells, power generation, and chemical synthesis. Carbon dioxide, as a major greenhouse gas, can be captured and stored from industrial sources to mitigate climate change; however, both face significant technical and economic challenges, which require advanced membrane technology to overcome. The Special Issue invites manuscripts solicited on the topical interest areas of (i) design and synthesis of novel membranes with enhanced properties, (ii) characterization and modeling of membrane performance and transport mechanisms, (iii) evaluation and comparison of membrane-based technologies with conventional methods, (iv) membrane fuel cells for energy production, (v) membrane-based electrochemical reactors for carbon utilization, and (vi) development of robust electrocatalyst membrane assembly for hydrogen production.

Guest Editors

Dr. David Alique

Dr. Neng Huang

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Deadline for manuscript submissions

closed (10 December 2024)

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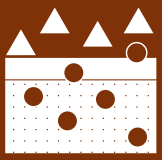

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About the Journal

Message from the Editor-in-Chief

You are cordially invited to contribute a research article or a comprehensive review for consideration and publication in *Membranes* (ISSN 2077-0375). *Membranes* is an international, peer-reviewed open accessjournal of membrane technology published monthly online by MDPI. The journal covers the broad aspects of the science and technology of both biological and non-biological membranes, including membrane dynamics and the preparation and characterization of membranes and their applications in water, environment, energy, and food industries. Articles contributing to better understanding of transport processes in all types of membranes are also welcome. The scientific community and the general public have unlimited and free access to the content as soon as it is published. We would be pleased to welcome you as one of our authors.

Editor-in-Chief

Prof. Dr. Spas D. Kolev
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